## **ABSTRACT**

A method and system of alternatively selecting an encryption key used to transmit a known number data bits and providing sufficient information to inform the receiving part of the selected encryption key is presented. In one embodiment of the invention, a plurality of encryption keys are available to the parties of the communication network. The transmitting party selects an encryption key used to encrypt a message block based on the data content of a previously transmitted message block. The receiving party, having received, and decrypted, a previously transmitted message block has sufficient information to determine the encryption key used to encrypt a subsequent data block and is able to decrypt the subsequently transmitted message.